

GEOMETRY

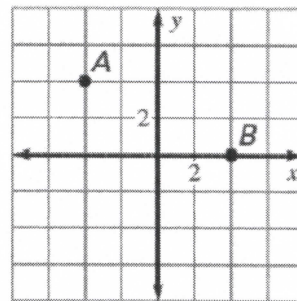
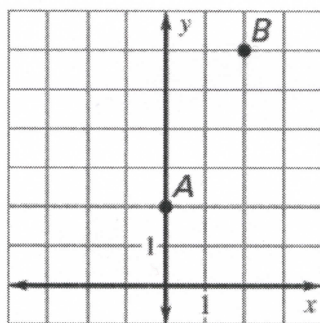
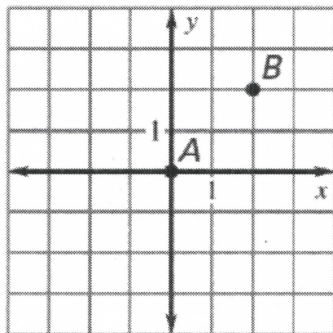
Unit 3 Worksheet 7

Name ANSWER KEY

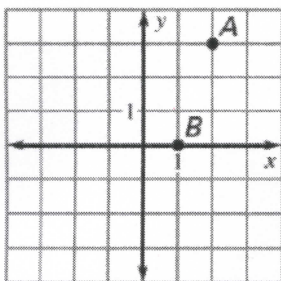
Period _____ Date _____

For #1 - 6, find the slope of the line that passes through the given points.

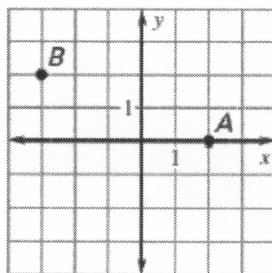
1) $m = \frac{2-0}{2-0} = \frac{2}{2} = 1$ 2) $m = \frac{6-2}{2-0} = \frac{4}{2} = 2$ 3) $m = \frac{0-2}{2-2} = \frac{-2}{4} = -\frac{1}{2}$



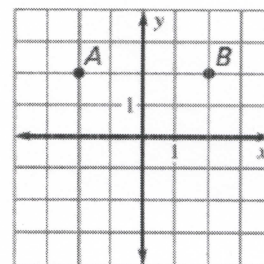
4) $m = \frac{0-3}{1-2} = \frac{-3}{-1} = 3$



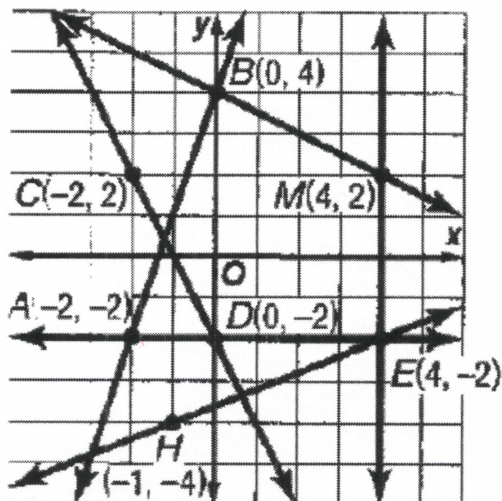
5) $m = \frac{2-0}{-3-2} = \frac{-2}{-5} = \frac{2}{5}$



6) $m = \frac{2-2}{2-2} = \frac{0}{4} = 0$



For #7 - 12, use the picture to determine the slope of the line.



7) \overline{AB}
 $m = \frac{4-2}{0-2} = \frac{2}{-2} = -1$

8) \overline{CD}
 $m = \frac{-2-2}{0-2} = \frac{-4}{-2} = 2$

9) \overline{EM}
 $m = \frac{2-2}{4-4} = \frac{0}{0}$
UNDEFINED

10) \overline{AE}
 $m = \frac{-2-2}{4-2} = \frac{-4}{2} = -2$

11) \overline{EH}
 $m = \frac{-4-2}{-1-4} = \frac{-6}{-5} = \frac{6}{5}$

12) \overline{BM}
 $m = \frac{2-4}{4-0} = \frac{-2}{4} = -\frac{1}{2}$

Find the slope between the given points. Be sure to simplify your answers!

13) $A(4,2), B(5,1)$

$$m = \frac{1-2}{5-4} = \frac{-1}{1} = -1$$

14) $C(-3,2), D(4,-5)$

$$m = \frac{-5-2}{4-(-3)} = \frac{-7}{7} = -1$$

16) $E(-6,4), F(-4,8)$

$$m = \frac{8-4}{-4-(-6)} = \frac{4}{2} = 2$$

17) $G(9,8), H(3,5)$

$$m = \frac{5-8}{3-9} = \frac{-3}{-6} = \frac{1}{2}$$

18) $I(3,-5), J(5,7)$

$$m = \frac{7-(-5)}{5-3} = \frac{12}{2} = 6$$

19) $K(5,-7), L(11,-5)$

$$m = \frac{-5-(-7)}{11-5} = \frac{2}{6} = \frac{1}{3}$$

Find the slope of the following lines:

$$y = mx + b$$

20) $y = -2x + 7$ $m = -2$

x	y
0	7
1	5

$$m = \frac{5-7}{1-0} = \frac{-2}{1} = -2$$

21) $3x + y = 10$ $m = -3$

$$y = -3x + 10$$

x	y
0	10
1	7

$$m = \frac{7-10}{1-0} = \frac{-3}{1} = -3$$

22) $2x + 4y = 12$

$$\begin{array}{r} -2x \\ 4y = -2x + 12 \end{array}$$

$$\frac{4y}{4} = \frac{-2x}{4} + \frac{12}{4}$$

$$m = -\frac{1}{2}$$

$$y = -\frac{1}{2}x + 3$$

x	y
0	3
2	2

$$m = \frac{2-3}{2-0} = \frac{-1}{2}$$

23) $-6x + 3y = -5$

$$\begin{array}{r} +6x \\ 3y = -6x - 5 \end{array}$$

$$\frac{3y}{3} = \frac{-6x}{3} - \frac{5}{3}$$

$$m = 2$$

$$y = 2x - \frac{5}{3}$$

x	y
0	$-\frac{5}{3}$
1	$\frac{1}{3}$

$$m = \frac{\frac{1}{3} - (-\frac{5}{3})}{1-0} = \frac{\frac{6}{3}}{1} = \frac{2}{1} = 2$$